

Living with Wildlife



Photo by Tera Waters

Moose

Approximately 3,000 moose (*Alces alces*) are estimated to live in Washington State. The majority of these are in the Selkirk Mountains (Pend Oreille, Stevens, Ferry, and Spokane counties) with smaller populations in the north Cascades, Okanogan, and Blue Mountains. Moose have been documented to wander into many other places throughout the state including the high desert country of the Columbia Basin. As the largest member of North



Photo by Keith Nelson

America's deer family, the moose is unforgettable, whether viewed from a distance or especially when encountered up close. Its sheer size commands respect. Its uniqueness makes it a curiosity. Moose are dark brown and long-legged with massive shoulders. They have prominent muzzles with an overhanging upper lip, and a large flap of hair-covered skin that hangs beneath the throat called a "bell" or a dewlap. Adult males, or bulls; have broad, flat, palmated antlers tipped with a number of points, depending on age and health. Yearling males have forked antlers and by about five years of age the familiar palmated rack has developed. Antlers are shed during the winter and regrown each spring.

Shiras Moose (*Alces alces shirasi*) Washington's moose belong to a subspecies called "Shiras" moose, which is physically smaller than more northern-dwelling moose. Adults measure nearly six feet at the shoulder. Bulls weigh between 850 and 1,100 pounds and adult females or cows weigh between 600 and 800 pounds. Adult bull's antler spread range from 35–45 inches and rarely exceeds 55 inches across.

Facts about Moose

Food and Feeding

- The name for moose came from a Native American tribe, the Algonquin, and translates to "twig eater." This is an appropriate name as these animals predominately consume twigs, bark, and leaves of trees.
- In areas with abundant wetlands, moose will eat aquatic vegetation and willows. But in less wet areas, like northeast Washington, they also eat the woody browse in early stages of regrowth following disturbances like fires, logging, and clearing.
- Moose are considered a pioneering type animal and adapt to a variety of available forage that change seasonally.

Habitat and Range

- Generally moose prefer forested habitat where there are lakes, marshes, and other wetlands. They have a circumpolar distribution around the world.
- Moose have expanded their geographic range in some states, but most locations include cold winters with seasonal snow cover. This is due in part to their large bodies; moose prefer temperatures below 60°F in summer and below 32°F in winter.
- With its great size and forage demands, the home range of the average moose in any given season is approximately three to six square miles, although they habitually wander much further.

Reproduction and Family Structure

- Moose tend to be loners, except for cows when they have calves. Adult bulls occasionally form temporary aggregations following the rut in autumn.
- Calves often live with their mother until the cow drives them off to give birth to a new calf.

- Once in a while, a yearling will re-group with the family several weeks after birth of the new calf and remain with the cow for up to two years of age.
- Breeding occurs in the fall, with the rut typically beginning around mid-September to early October.
- Calves are born as single or twins in May – June.

Mortality and Longevity

- Black bears and cougars are the most common predators of moose calves in Washington. In areas where wolves and grizzly bears are more abundant, they are the dominant moose predators.
- Hunting, vehicles, male to male competition, parasites, and disease are also responsible for moose mortalities (see Management).
- Few moose live past 15 years of age in the wild. The lifespan of a moose differs between the sexes, with the average being around 8 years old.

Management

The Washington Department of Fish and Wildlife (WDFW) classify moose as a game animal. A limited number of special, once-in-a-lifetime “any moose” (antlered bull or antlerless cow) hunting permits are issued each year on a drawing basis to hunters with valid licenses and tags. The season is open during October and November in several Game Management Units (GMUs) in northeast Washington. Special hunting permits for antlerless-only moose are also issued on a drawing basis, including some just for youth hunters (under 16 accompanied by adult), senior hunters (65 and older), disabled hunters, and Master Hunters (used for moose damage control).

Washington's moose population has been slowly growing since the first confirmed moose sighting was made in Pend Oreille County in the 1950s. A study conducted in the 1970s indicated a population of approximately 60 moose. The first moose hunting season in Washington was in 1977 with three permits in the Selkirk Unit of Pend Oreille County. Increased moose sightings throughout the area and beyond suggested a growing population, and in 1987 the first moose hunting permit was allowed in the Mt. Spokane Unit. By 1998 there were a total of 43 permits among five GMUs. By 2015 there were 107 any moose permits and 71 antlerless permits across 12 GMUs.

Preventing Conflicts



An even greater testimony to the parallel growth of both human and moose populations in Washington is the increased incidence of moose wandering into the suburban and urban areas of Spokane. Moose sometimes take up residency where water and succulent vegetation is more readily available. By 2015, almost daily reports of problem or “nuisance” moose were received by WDFW’s Eastern Region office in Spokane Valley or WDFW Enforcement officers who respond to potentially dangerous wildlife situations.

Landscaping considerations

When creating a new landscape or planning for the one you already have, there are several features that could increase unwanted moose residency at your property.

- Ponds, pools, and other large water features. Landscaping with these features can attract moose during all times of year, but more specifically during hot summer months. It is very difficult to encourage moose to move away from these types of landscapes.
- Landscaping plants. Species of plants that are of specific interest to moose include fruit tree branches, dogwood, willow, aspen, birch, fir, and pine species. Eliminating or reducing access to these species of plants can discourage moose from spending significant time at your property.

Alter hot summer sprinkler usage

During the days when temperatures are hot, moose are likely to look for cool and wet locations during the daytime hours. During these months, try to water lawns at night. This will decrease moose usage of your property.

Never feed moose

Moose that are fed by people often become aggressive when they are not fed as expected. They may attack another person who has no food to offer. A moose with a history of unprovoked attacks on people may have to be killed to protect public safety.

Do not approach any moose

Even if moose seem quiet and gentle, they can change their disposition rather quickly. Moose often lay down in the shade of buildings and trees to rest and cool down. If approached repeatedly, even by the best-intentioned onlookers, it may become stressed and aggressive. Enjoy the visitor from a respectable distance. Use binoculars and telephoto camera lenses. Be patient and wait for the moose to move along.

Keep all dogs under control and away from moose

Moose consider dogs, which are close relatives of wolves, to be a direct threat. Moose have been known to go out of their way to kick at a dog, even one on a leash or in a fenced yard. If you see a moose where you live, bring dogs inside. If you're walking with your dog and see a moose, keep your dog quiet and take an alternate route out of the area.

Using loud noises and scare devices on moose

If a moose spends any considerable amount of unwanted time on your property, the careful use of loud noises (banging pots and car horns) or scare devices (bird scare pyrotechnics and air horns) may be used to encourage the animal to move along. It is important to note that the best time to use this type of deterrent is from a safe location, a safe distance, within a short period of time of the moose's arrival at your property, and earlier in the morning (if on a hot day).



How does WDFW address moose reports?

Reported moose problems are addressed in many ways and our actions are dependent on each situation.

- **Advice.** Most often property owners are advised on simple ways to discourage moose and avoid property damage or safety threats.
- **WDFW hazing.** Sometimes WDFW personnel attempt to “escort” or haze moose away from the potential hazards of civilization and back to the woods, using non-lethal projectiles like paintball guns.
- **Immobilization and relocation.** Very rarely, moose in areas not conducive to hazing are immobilized via darting, and subsequently relocated. This method is not used often due to the danger to WDFW personnel, the public, and the moose. For example, occasionally moose do not metabolize the immobilization drugs or they can regurgitate food into their lungs and may die.. Relocated moose are marked, either with colored ear tags or radio telemetry equipment to learn more about where they go and whether they are repeat visitors to heavily populated areas.
- **Lethal removal.** Occasionally, moose have to be lethally removed by WDFW or by Master Hunters. This is typically in cases where moose have made contact with people or domestic animals (like dogs) and are euthanized due to human safety concerns (See Safety in Moose Country).

Safety in Moose Country

Most people seem to like moose because they're so different. They don't seem to spook or shy away from us as readily as deer, and may appear docile or even curious while around people. It is important to remember that anything as large as a moose can be dangerous; this is why these animals are classified as Dangerous Wildlife. Although moose have long legs, they are not built for speed like deer. Moose will often choose “fight” over “flight” to escape a situation or when they feel threatened.

What does an aggressive or agitated moose look like?

- They may lay their ears back flat.
- The long fur between their shoulders may stand up, looking like a “shoulder mohawk”.
- They may lower their head while looking in your direction.
- They may stomp or paw at the ground.
- They may lick their lips.
- They may charge you. A charging moose often kicks forward with its front feet, knocking down the threat, then stomping and kicking with all four feet.
- Antlered bulls may use their palmated antlers on trees or bushes.



- Breeding bulls in September may dig up the ground and urinate on it.

Moose can be aggressive any time, but at these times in particular:

- In early summer when a cow feels her young calf may be in danger. This time frame includes May through June. If you see a calf and not a cow, be extremely careful moving out of the area; you may have walked between mother and baby, which is probably the most dangerous place to be.
- In the fall when a breeding bull is competitive and agitated. The peak of this “rut” is generally late September and early October, but it can extend from early September through late November. Cow moose can be aggressive at this time, too. Although these animals aren't focused on you at this time, give them a wide berth to avoid being mistaken as intrusive competition.
- In the winter when their bodies are depleted from reduced food availability, traversing deep snow, and possibly heavy tick loads.
- Anytime dogs chase or bark at them.
- Anytime people approach them too closely.

Because moose can be aggressive any time of the year, what do you do when you see a moose?

When recreating in the outdoors:

- Give them space, more than 25 yards if you can.
- If you're hiking, yield the trail in whatever way works - back off, change directions, and enjoy the animal only from a distance. Keep dogs on a leash and quiet.
- During the winter when snowmobiling, skiing, or snowshoeing be aware that moose travel on broken trails to save energy.

In developed areas:

- Give them space, more than 25 yards if you can. Also, if you must come within this distance, keep large structures between you and the moose like a shed, car, or large tree.
- When you are driving and come upon a moose standing or walking in the road, yield to the moose. It may be trying to rest or save energy, and if you try to move it, your motor vehicle could come under attack. If you are driving at night in an area that is frequented by moose, slow down and be extra cautious— a collision with a moose could be fatal for both of you.



In case of attack...

Moose attacks on humans are considered very rare, but it is important to be prepared. Many moose charges are bluffs or warnings, but you need to take them all seriously. Even a calf, which weighs 300 to 400 pounds by its first winter, can injure you. A moose that sees you and walks slowly toward you is not trying to be your friend. It is probably warning you to keep away (or looking for a handout if it's been fed).

How to respond to an aggressive or agitated moose:

- Back off to create space. Look for the nearest tree, fence, building or other obstruction to hide behind. Unlike with cougars, bears, or even dogs, it's usually a good idea to run from a moose because usually it won't chase you very far.
- If a moose knocks you down, it may continue running, or start stomping and kicking. Curl up in a ball, protect your head with your arms and hands, and hold still. Don't move or try to get up until the moose moves a safe distance away, or it may renew its attack.

When to contact WDFW

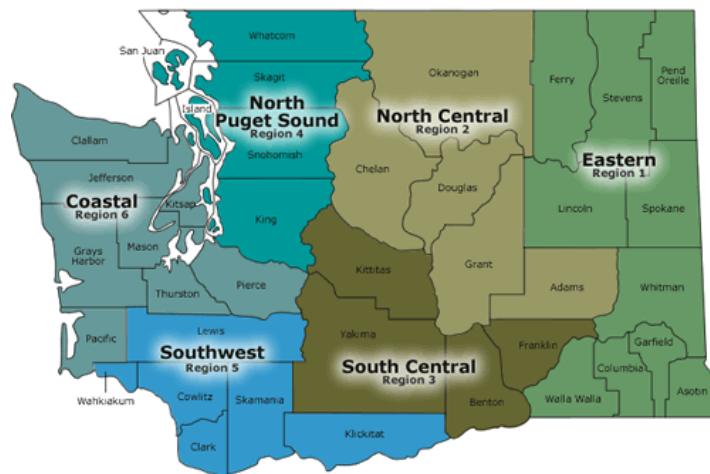
Moose are a unique part of the high quality of life in Washington, but there may be times when you need to contact WDFW for additional assistance. Below we have outlined circumstances and contact information in those situations.

- If you see a moose in your neighborhood and have questions about them in general or would like to report a sighting. Call the WDFW Regional Office in the area where the moose is located during the week (Please see the WDFW Regional Office map and table below).
- If a moose has been on your property for an extended period of time and you'd like advice on how to encourage the animal to move along. Call the WDFW Regional Office in the area where the moose is located during the week (Please see the WDFW Regional Office map and table below).

- If a moose acts aggressively (see description above) or contact has been made with one of your animals or yourself. Call Washington State Patrol Dispatch Number where the moose is located any time or day during the week (Please see the WSP map and contact information table below).
- If you think you see an injured or orphaned moose. If the moose looks injured, but is still moving around, leave it alone. Wild animals are very resilient and can recover from a wide array of injuries and the extra stress of interacting with a human can be detrimental to the animal. As for orphaned moose calves, just like with deer fawns, moose calves are rarely ever orphaned. If you see an injured moose or moose calf several days in the same location, it is not mobile, seems weak, or thin, call the WDFW Regional Office in the area where the moose is located during the week (Please see the WDFW Regional Office map and table below).
- During these situations, confine dogs, other pets, and keep children inside. Give the moose ample room to move out of your yard by not blocking escape routes. Draw curtains on large glass doors and windows so that moose don't mistake them for an escape route.

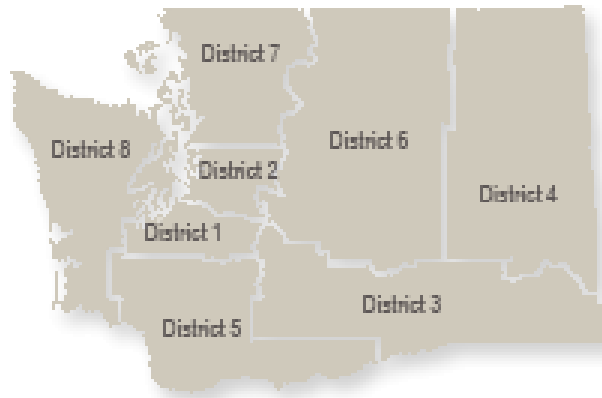
If we take the time to think about moose behavior and our own in response to them, and we teach our children to do the same, we can enjoy sharing space with this spectacular animal.

Washington Department of Fish and Wildlife Regional Office Phone Numbers



WDFW Regional Office	Phone Number
Region One	(509) 892-1001
Region Two	(509) 754-4624
Region Three	(509) 575-2740
Region Four	(425) 775-1311
Region Five	(360) 696-6211
Region Six	(360) 249-4628

Washington State Patrol Phone Numbers



Aberdeen/Hoquiam	(360) 533-5707
Bellevue	(425) 649-4370
Bellingham	(360) 676-2076
Bremerton	(360) 478-4646
Burlington	(360) 757-1175
Centralia/Chehalis	(360) 748-6633
Ephrata	(509) 754-3571
Gig Harbor	(253) 858-8800
Long Beach Peninsula	(360) 533-5707
Longview/Kelso	(360) 577-2050
Marysville	(360) 658-1345
Olympia	(360) 596-1999
Port Angeles	(360) 452-3394
Shelton	(360) 426-6674
Spokane	(509) 456-4101
Tacoma	(253) 536-6210
Vancouver	(360) 449-7999
Wenatchee	(509) 663-9721
Yakima	(509) 575-2320

Adapted from "*Living with Wildlife in the Pacific Northwest*"

(see <http://wdfw.wa.gov/living/book>)
Written by: [Russell Link](#), Urban Wildlife Biologist

Additional Information

Books

Schwartz, Charles C., Franzmann, Albert W., and McCabe, Robert E. *Ecology and Management of the North American Moose*. University Press of Colorado. 2007.

Internet Resources

Alaska Fish and Game Living with Moose. <http://www.adfg.alaska.gov/index.cfm?adfg=livewith.moose>

Animal Diversity Web *Alces alces*. http://animaldiversity.org/accounts/Alces_alces/

Washington Department of Fish and Wildlife moose research update 2015. <http://wdfw.wa.gov/publications/01699/>